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ABSTRACT

The purpose of this small scale study was to make a preliminary assessment of the potential value of the ERIC data base for educators in Britain. On-line searches of the ERIC data base were conducted for a sample of fourteen users who were asked to comment on the relevance of retrieved materials. Results indicate that ERIC can provide access to relevant information not obtainable from other sources. Also included is a review of the use of computerized ERIC data base retrieval systems in countries other than the United States. (Author/STS)

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ERIC FEASIBILITY STUDY

A small-scale examination of the potential value of the ERIC data base to educationalists in Britain

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Report to the British Library Research and Development Department

on Project SI/CT/011.

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ABSTRACT

This report presents the results of a small-scale study to assess the potential value of the ERIC (Educational Resources Information Center) data base to British educationalists. It was carried out in order that a decision could be made as to whether ERIC should become an additional data base on which the Project on Experimental Information Services might draw.

On-line searches of the ERIC data base using the Lockheed DIALOG system were conducted for a "sample" of fourteen users, representative of a cross-section of educationalists, who had been asked to nominate a topic on which they were currently seeking information. Users' reactions to the results were obtained through a questionnaire and informal interviews.

In order to assess the variation between potential and actual relevance of documents and to obtain users' views on the quality of ERIC material, the study was taken a further stage by asking participants to choose several of the references which they had judged to be of high relevance and would like to follow up. These were obtained by the project team and sent to users together with evaluation forms for each of the documents and a form asking for more general comments.

In order to place this small-scale study in context, a section then follows reviewing case-studies on computerised information retrieval from the ERIC database in countries other than the United States.

The report warns against drawing detailed conclusions about the characteristics of the ERIC data base and its potential value to educationalists in Britain from the results of this modest "fact finding" study. Nevertheless it does appear that ERIC can provide very valuable access to information not obtainable through other sources and that the proportion of irrelevant or ephemeral items retrieved from the data base may not be significantly large. A recommendation is therefore made that ERIC be made available to a sub-set of the Project's main sample.

1. Introduction

The purpose of this study was to make a preliminary assessment of the potential value of the ERIC data base to educationalists in Britain. The Educational Resources Information Center (ERIC) was established in 1965 by the United States Office of Education as a means of improving bibliographic control in the field of education and as a way of providing better access to educational literature. ERIC operates through a decentralised network of 16 clearinghouses, which are located at various universities and professional associations throughout the United States. Each of these clearinghouses deals with a particular aspect of education (e.g. Educational Management, Higher Education, etc.) and acquires, analyses and abstracts or indexes documents in that area. Their combined output is published in two separate monthly bibliographical journals:

(1) Resources in Education (RIE)
which is published by the U.S. Department of Health, Education and Welfare/National Institute of Education, and has been operating since 1966

and (2) Current Index to Journals in Education (CIJE)
which is published by Macmillan Information Inc., and which was started in 1969.

Whilst CIJE indexes journal articles, RIE abstracts published and unpublished documents including theses, speeches, papers presented at meetings, research papers and technical reports. According to Booth (1975), about 15,000 documents are currently abstracted each year in RIE, whilst CIJE annually indexes about 20,000 articles from over 650 journals. As well as being available in printed form, RIE and CIJE are available in machine-readable form.

2. The Feasibility Study

In the initial stages of the Project on Experimental Information Services in Education, three data bases are being regularly searched: the British National Bibliography and the Library of Congress Catalog (which together comprise the MARC tapes) and the British Education Index. At a later stage in the Project, these may be enhanced by further data bases such as ERIC and the NFER Register of Educational Research. The principal value of ERIC is that it provides access to an extensive range of educational journal and report literature, mostly but not exclusively originating in the United States of America, which is covered neither by the MARC tapes nor by BEI. ERIC also permits searching on highly specific "descriptors" or indexing terms, and "free-text" searching, in which items can be retrieved on the basis of terms appearing in the

document title and abstract.

These potential benefits cannot easily be ignored, for it seems clear that most educational researchers and some (but probably not all) education lecturers place considerable reliance on the American literature as a source of information both about advances in research and about recent educational developments and innovations. Equally, since education is a field characterised by a relatively low degree of consensus on terminology and wide differences in American and British usage, a facility such as ERIC might help to increase the likelihood of relevant items being retrieved in searching.

Nevertheless, these benefits must be weighed against the criticisms which have been frequently levelled at the ERIC system. Powell, (1974), for instance, has pointed to the inadequacy of the system's "quality control", resulting in the appearance of an unacceptably high proportion of trivial or ephemeral items, while Foskett (1974), amongst others, has criticised the unstructured nature of the indexing system, which, he argues, is based on vague or inadequate definitions of terms, inconsistently applied.

There is also, of course, the question of cost: if ERIC were to be added to the data bases from which the service would draw information, either the ERIC files would need to be purchased or regular searches would have to be carried out via the Lockheed DIALOG system.

It therefore seemed desirable to undertake an initial, small-scale feasibility study in order to throw light on the potential value of ERIC to educationalists in Britain.

3. Methods

A total of fourteen users was selected as the "sample" for the study. The use of the word "sample" is perhaps somewhat misleading: its size was extremely modest and it was not in any sense random; nor indeed was it intended that the study should conform to the most rigorous standards of research. This would have required resources of time and manpower which were neither feasible nor desirable given its limited aims. Nevertheless an attempt was made to secure a broadly representative cross-section of educationalists, including researchers, lecturers, teachers and administrators in a variety of different educational institutions.

Each member of the sample was asked to nominate a topic on which information was currently being sought. Discussion of the topic with members of the project led to the drafting of a "search specification", which was

subsequently translated into a "profile", using the most appropriate terms in the Thesaurus of ERIC Descriptors*. The descriptors in the profile were linked by the Boolean terms "OR" "AND" and "NOT". This meant that by combining the terms in the profile in various ways it was possible to broaden, narrow or re-define the search. (An outline of each of the searches is given in Appendix 1).

The fourteen search requests varied considerably in terms of ease of profile construction. While some (such as the search on open plan schools) presented little difficulty, others were exceedingly complex (for example, the project-related search on information seeking and use of all kinds by educationalists). The main causes of difficulty in the construction of profiles were as follows:

(i) American terminology and concepts differed markedly from British usage (for example in search number 12, the different concept of "community schools" in each country).

(ii) Inadequacies and inconsistencies in the control of ERIC indexing terminology coupled with insufficient "scope notes" in the Thesaurus to permit accurate and precise differentiation between broadly similar terms.

(iii) The high specificity of terminology resulted in the need to use a large number of descriptors to ensure high recall. This can be seen, for instance, when descriptors are included in the profile to indicate a certain educational grade level, as in searches 2 and 11. (Indeed Booth (1975) has claimed that there are 25 terms relating to higher education alone).

Retrospective searches of the ERIC files, using the LOCKHEED DIALOG system in California, were conducted on-line from terminals in the Hatfield Polytechnic Library and the R & D Department of the British Library. As a limit was placed on the number of references which should be retrieved in each search in order to avoid excessive costs**, it was found that prepared profiles frequently required manipulating on-line in order to broaden, or more usually to narrow the search. The DIALOG system provides

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* Two members of the Project team had prior experience of searching the ERIC data base, one having searched manually and the other having searched on-line.

** The limit was set at approximately 30 references. The limit did not however apply to the first three searches undertaken - search numbers 1, 2 and 14.

TABLE I

INTEREST AND NEWNESS OF REFERENCES RETRIEVED

		Search Number													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
NUMBER OF ITEMS RETRIEVED		58	138	22	13	22	10	27	7	9	17	22	8	16	51
% OF ITEMS FOUND TO BE OF INTEREST	of great interest	43	15	9	0	20	20	40	30	10	-	9	0	25	20
	of moderate interest	17	30	23	100	30	20	30	55	20	20	9	37½	31	30
	of marginal interest	17	50	32	0	30	20	26	15	40	-	5	12½	19	20
	of no interest at all	22	5	36	0	20	40	4	0	30	-	77	50	25	30
% OF ITEMS FOUND INTERESTING WHICH WERE NEW		40	-	60	100	100	20	100	70	20	100	100	100	100	20
WAS THE PROPORTION OF ITEMS JUDGED TO BE "OF NO INTEREST AT ALL" ACCEPTABLE?		x	-	✓	-	✓	✓	✓	✓	✓	✓	-	-	✓	✓

Key: ✓ acceptable x unacceptable - no response given

the profile would have retrieved many more items*.

While eight users believed that the search had produced references to valuable material which they would not have come across by any other means, four believed that this was not the case.

General comments on the results of the ERIC searches were obtained both from an open-ended question at the end of the questionnaire and in the course of visits to and informal interviews with each of the users. Their comments indicated reservations about the success of the searches. Criticisms fell into one of the following categories:

(i) the American bias of references (but also the lack of British material cited)

(ii) the failure of the search to retrieve key references or references from key journals of both British and American origin which were covered by CIJE

(iii) the lack of abstracts, which made assessment of references difficult, particularly in relation to obscure or little-known American periodicals

(iv) the narrowness of the profile and/or the small number of references retrieved

(v) difficulties in the interpretation of the search request

(vi) the retrieval of irrelevant items which seemed to bear little relation to the profile indexing terms

(vii) the difficulty of reading the on-line print-out

5. Follow-up of References Retrieved

A further evaluation stage was included in the study in order to determine more accurately the relevance and value of the items retrieved. Since one of the major criticisms of ERIC was that it included a disproportionate number of documents that were ephemeral or of doubtful significance, it seemed desirable to attempt to evaluate the

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* The print-out sent to each user showed how on-line searching had been carried out, and indeed an explanation of the search was given verbally by the project team. It was therefore apparent to some users that the imposition of an upper limit on the number of references retrieved had "artificially" narrowed the search profile and had, in one or two cases, reduced by a very considerable amount the number of references actually retrieved. This was naturally a source of disappointment, but disappointment was perhaps also due to some extent to a variant of the so-called "halo-effect" - excessive expectations of the fruits of computerisation.

original documents as well as the bibliographical references to them - in other words, to attempt to assess "actual" as well as "apparent" relevance. Members of the sample were therefore invited to select items judged to be of high relevance, and the project team undertook to obtain copies of the documents on the users' behalf. The selection of documents obtained for each user generally included both microfiche (ERIC reports) and photocopies (journal articles)*. Each document which was subsequently sent to the users was accompanied by a brief evaluation form requesting assessments of the relevance and value of the document, the likelihood of a reference to the document being included in any future report or publication prepared by the user, and information on whether or not the document had yielded further references which the user intended to follow up. There was also a more general evaluation form which invited general comments on the documents and included a fuller statement of the questions posed, as follows:

(i) RELEVANCE TO SEARCH TOPIC	To what extent is the document relevant to the topic of the search?
(ii) VALUE TO YOU IN YOUR WORK	To what extent, if any, is the document of value to you in your work in the area covered by the topic?
(iii) BIBLIOGRAPHICAL LISTING	Are you likely/unlikely to include a reference to the document in any future article/book/thesis/report/etc?
(iv) FURTHER REFERENCES	Did the document yield further references which you intend to follow up?
(v) COMMENTS	(Please add any comments you wich to make)

The results of this second evaluation stage are shown in Table 2. No data appearson search number 14 because the user failed to complete and return the evaluation forms, despite repeated requests to him to do so. There is no data in the Table on search number 2 because the user (in fact a project team) had already taken steps to obtain a large number of the documents when contacted; they did, however, report a high level of satisfaction with the material obtained, which had included valuable bibliographies which were unlikely to have been located in any source other than ERIC. The results indicated that, out of the total of 47 documents sent to participants, only five were judged to be of no relevance to the search topic and only three were considered to be of no value to the

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* The Project team requested the documents from the British Library Lending Division at Boston Spa. Some journal articles which were requested (e.g. from the Journal of the International Association of Pupil Personnel Workers) were unavailable in this country.

TABLE II

EVALUATION OF ERIC DOCUMENTS BY MEMBERS OF THE USER GROUP

Search Number		1	3	4	5	6	7	8	9	10	11	12	13
NUMBER OF DOCUMENTS FOLLOWED UP		5	6	2	4	3	4	5	4	6	3	1	4
RELEVANCE TO SEARCH TOPIC	high	3	4	2	1	1	2	4	1	2	0	0	2
	moderate	1	2	0	0	2	2	0	3	1	1	1	2
	marginal	*	0	0	0	0	0	0	0	3	1	0	0
	none	0	0	0	3	0	0	1	0	0	1	0	0
VALUE TO YOU IN YOUR WORK	high	3	3	0	1	1	1	2	1	4	0	0	2
	moderate	1	3	2	1	2	3	3	0	1	1	1	0
	marginal	*	0	0	1	0	0	0	3	0	*	0	2
	none	0	0	0	1	0	0	0	0	1	1	0	0
BIBLIOGRAPHIC LISTING	likely	5	4	2	2	1	2	4	4	4	-	1	2
	unlikely	0	1	0	2	2	2	1	0	2	2	0	2
FURTHER REFERENCES	yes	1	2	2	2	1	3	2	2	1	1	0	1
	no	4	3	0	2	2	1	3	2	5	2	1	3

* document judged to be between moderate and marginal

user in his or her work. It was found that members of the user group expected to cite twenty-eight of the documents in future articles, books, theses or reports, including three documents which had been assessed as being of only marginal value to them in their work. Eighteen documents yielded further references which respondents intended to follow up. Overall, therefore, it would appear from these results that users found the documents both relevant and of value to them in their work.
An open-ended question on the general evaluation form allowed for users' comments on the documents as a whole. A representative selection of these comments are given below:

User 1

"Microfiche form rather difficult for us since we have to use a library reader not usually available to non-library staff. One of copies very difficult to read in this form. We prefer Xerox since we use various articles regularly."

User 3

"I was pleasantly surprised to find the degree of relevance of the documents. Naturally there is a strong American content which inevitably, therefore, has its limitations. Nevertheless the work covered a broad filed and was all related to teacher education".

User 4

"The articles were right on target. I found the microfiche difficult to get used to - I like to underline/comment on the paper. Though the printing out machine made it possible to get a copy (expensive) - but, then, why not get a photocopy to begin with.

Obvious advantage for storage/postage etc.

I don't know whether I should like to use microfiche very often - perhaps for the occasional article where the journal is unavailable it's an excellent medium.

User 5

"I cannot comment really on the proportion of 'useful' material - I have no experience to make comparisons. It was my first experience with microfiche - I found them difficult - my most useful article was blighted by illegibility."

User 6

"The first time I have used a microfiche reader, ana a very valuable medium - economic of time and effort. The material was of expected quality and I regret the difficulty one normally has with getting hold of such material. I regard the organisation of a central bureau for the transmission of specialist documents essential to the future of research work. The degree of redundant material one comes across in much research work appears to be no greater as regards this experiment."

User 8

Two of the documents were extremely useful and interesting research reports which I could not have located through any other source. The readability of the three documents in microfiche was good to excellent, though somewhat diminished by the poor reader available to me.

User 9

The quality was variable. Management Teacher Development is a new field, however, and it is to be expected that good references are scarce. Two of the references make little attempt to link their practice with theory, and their evaluation methodology is unsound. As examples of M.D. practices, they are nevertheless interesting to mote. Two other referenceswere useful examples, had a better link with theory and had at least some attempt at evaluation (despite having no control group).

Somehing more was expected. We had no examples (except one cited by Campbell) of good M.D. research. There was nothing on management teacher skills and styles despite all the interaction analysis done on schoolteachers.

I suspect then, that the quality was lower than average by today's standards. The use of microfiche presented no problems. This is an excellent source of information transfer. At 5p a page, the cost of copying is too high!

User 10

Microfiche found to be a satisfactory medium. Major critism that the papers retrieved were not sufficiently recent. However, it was interesting to see material form difficult-to-obtain conference proceedings.

User 11

Documents were well set out and quite clearly presented the facts and results. The Documents, while being of little specific, immediate help to teachers of young children, have stimulated further discussion in the staffroom of the balancewe hope to achieve shortly between factural attainment and the fostering of attitudes in our R.E. teaching.

User 12

The fact that only one relevant document has been found is the most disappointing aspect of this exercise. The article itself is an interesting one in that it reinforces my poinion about the role of my school in the community and I am at present working towards such an integrated organisation. It is only however a small section of the whole question of enquiry. Whether a document about a large high school in America can have relevance in my situation however is perhaps the most dubious aspect of this article.

User 13

The documents enclosed were an interesting mixture of the highly relevant and very useful and the moderately relevant but marginally useful.

6. Related research studies

This section of the report is concerned with computerised information retrieval from the ERIC data base outside the United States: it draws on case studies in Britain, Sweden, Australia and Canada.

Great Britain There has been a dearth of British studies of computerised information retrieval using the ERIC data base. Indeed, at present, there are only a small number of libraries in this country which have facilities for conducting searches of ERIC using a computer. Although no British locations appear in the latest edition of the 'Survey of ERIC Data Base Search Services' (Pugh, Embry and Brandhorst 1976), several libraries are known to have access to the ERIC files through the Lockheed DIALOG system in California or the Systems Development Corporation (SDC) system. Some supplementary information on the value of ERIC to educationalists in Britain was derived from a project, conducted at Brighton Polytechnic School of Librarianship and sponsored by the British Library, on methods of teaching on-line information searching techniques to students. Searches of the ERIC data base were conducted for three staff members of Brighton Polytechnic School of Educational Studies, three from Brighton College of Education, seven mature students on an in-service B.Ed. course and a member of the polytechnic staff concerned with a computer aided management of learning project. A questionnaire and interview schedule were used to ascertain user reaction to the service, although, to some extent, the results obtained were peripheral to the project as a whole. In the context of the lack of British studies on computerised information retrieval from ERIC, the data on users' responses provides support of ERIC's potential value to British educationalists. This is despite the fact that only four of the staff members at the college of education and polytechnic returned the questionnaire after the interview and not all these were fully complete. Out of those who replied, the majority felt that ERIC's American bias detracted from its usefulness, although significantly none found that it made their material unacceptable and none of the users had previously seen any of the retrieval items. Outside the United Kingdom, computerised information retrieval services from the ERIC data base are available in 200 locations in the United States (Pugh, Embry and Brandhorst 1976) as well as in Australia, Canada, Mexico and Sweden. ERIC tapes are also subscribed to by the International Labour Organisation in Geneva and the European Space Research Organisation.

Sweden At the Royal Institute of Technology in Stockholm, ERIC tapes are searched for SDI purposes using the VIRA search system. Tell, Wessgren and Hemborg (1972) reported that the service had 158 users after having been in operation for eighteen months. Profiles were constructed using descriptors drawn from the Thesaurus of ERIC Descriptors as well as free-text searching. The latter option made it possible to run the profiles against other data bases such as ISI, INSPEC and COMPENDEX. The authors state that "free text searching can be regarded as using a set of skeleton keys to open any machine readable file" (p.15). The results from the two different modes of searching show that, in many cases, free text searching performs as well or even better than using terms from the ERIC Thesaurus. Searching ERIC has proved to be an economic proposition: the service breaks even, more or less, between computer costs plus costs of tapes and the subscription fees obtained for profiles. This leaves construction of profiles as a common library cost but, in some cases, users construct their own profiles. Although the "noise" level in ERIC is higher than the library normally experiences from other data bases, the authors conclude that

> "user reaction in the form of requests for photocopies are high enough to be able to infer from the other services we run that here is a good indicator of user acceptability of ERIC" (Tell, Wessgren and Hemborg 1972, p.21).

Australia The Education Information Service, operated by the National Library of Australia, currently offers SDI searches of the ERIC data base to some 190 people. It was established following a research project, carried out jointly by the Library and IBM Australia between September 1972 and January 1974, with a maximum sample of 50 participants. The study produced an average precision ratio (i.e. proportion of relevant to retrieved items) of 59% on SDI searches: the ratio was somewhat higher for CIJE (65%) than for RIE (56%). The proportion of new to relevant items was 90% and was similar for both CIJE and RIE. The precision ratio varied significantly between different user groups. The highest precision was obtained with searches for users in colleges of advanced education (87%) followed by those in universities (64%), education research establishments (47%) and government departments (24%). It was found that users intended to follow up 29% of relevant citations and that the follow up ratio was slightly higher for RIE than CIJE. Criticisms of ERIC by users included poor quality indexing, the American bias and the inadequate quality control of material. In mitigation of these criticisms, McCallum (1975), the author of the project's report, points out that free text searching of the data base emphasised variations in terminology and vocabulary. He adds that although only about 5% of

entries are of non-American origin, the criticism of American bias "would be valid only if the ERIC system claimed a 100% coverage of English language material - which of course it does not" and that "the addition of a substantial quantity of Australian material could well remove the source of protest" (p.40). Finally, in reply to comments on quality control, he states that "in fairness it should be pointed out that the ERIC system is designed to capture and disseminate fugitive publications which would otherwise pass unnoticed, and that if such zealous collecting results in a lowering of entrance standards, it is probably a reasonable price to pay for a comprehensive coverage of American research work" (p.41).

The project indicated the potential value to Australian educationalists of an information service based on the ERIC data base and a service of this kind was announced in October 1974. Killen (1976) has indicated that since its establishment, "reaction to the ERIC SDI service has been extremely favourable". A questionnaire was sent to users in October 1975 to obtain data on the user group and to ascertain reactions to the service; one hundred and fifty questionnaires were completed and returned. Killen points out that most replies "indicated that the service is valued as an important, and in some cases indispensible aid to research". Indeed, 68% of respondents claimed that they would be 'very greatly' or 'considerably' inconvenienced if the service were discontinued. Users were mainly employed in tertiary institutions and government departments or organisations: only 3% were drawn from schools.

Canada As a result of its proximity to the United States, ERIC has possibly had a greater impact in Canada than in Great Britain, Sweden or Australia. This is illustrated, to some extent, by the fact that there are eight locations for computerised search services in the country (Pugh, Embry and Brandhorst 1976) and that there are 30 locations for the complete ERIC microfiche collections (ERIC Processing and Reference Facility, 1975).

In a small-scale study, carried out for one month in early 1973, a computer terminal was installed in the library of Ontario Institute for Studies in Education (OISE). This permitted on-line searches of the ERIC data base using the SDC (Systems Development Corporation)/ERIC system. Requests for searches came mainly from three types of organisation: boards of education, Ministry of Education, and OISE. During the period of the experiment, 186 searches were undertaken requiring about 49 hours of computer time (i.e. approximately 15 minutes on-line per search). Generally users found the results satisfactory and timely. However Auster and Lawton (1973,1974) have indicated some of the disadvantages

of automated retrieval of ERIC materials for Canadian educators. ERIC's lack of Canadian material is cited as its most serious shortcoming. Very few Canadian reports appear in RIE and of the 200 journals indexed by Canadian Education Index, only 26 are covered by CIJE. In addition, policies regarding the inclusion, exclusion and indexing are outside Canadian control. Consequently, where there are differences in terminology between the United States and Canada, terms which are used exclusively or with a different meaning in Canada are not included in ERIC. However, on the basis of the experiment at OISE, a recommendation was made that "implementation of the SDC/ERIC On-line Bibliographic Search Service by OISE would make a genuine contribution to OISE, to the province of Ontario and to the educational profession. OISE would be making use of the latest technological innovation - an innovation - from the users' evaluations - which appears to have valuable returns". (Auster and Lawton 1973, p.18).

The National Library of Canada currently offers not only on-line searches through SDC/ERIC and Lockheed DIALOG but also a national batch-mode current awareness service in the social sciences known as CAN/SDI in which RIE and CIJE are covered.

7. Conclusions

It was emphasised at the outset that the study reported here represented a modest attempt to gain practical information on the feasibility and desirability of drawing on the ERIC data base in the experimental information services offered by the Project. It was, then, a "fact-finding" study rather than a rigorous empirical investigation.

It would therefore be extremely hazardous to attempt to draw any detailed conclusions about the characteristics of the ERIC data base and its potential value to educationalists in Britain. Nevertheless, for the purposes of assisting in a decision whether or not to include ERIC in the data bases upon which the Project draws, a number of observations can be made.

For the study's modest but not entirely unrepresentative sample, ERIC was a useful source of educational information. As the foregoing review indicated, there is hardly any data available on computerised retrieval of ERIC by British educationalists and thus no ready yardstick against which to assess the results obtained in the study. Nevertheless the results seemed at the very least satisfactory, comparing favourably (and broadly paralleling) those for countries outside the U.S.A. Nearly three-

quarters of the items retrieved were of interest to the users, while a similar proportion of items were new to them*. These findings indicate that ERIC can provide very valuable access to information not obtainable through other sources and that the proportion of irrelevant or ephemeral items retrieved may not be significantly large. Moreover journals covered by CIJE are now held by the Lending Division of the British Library in Boston Spa, which also has available in microfiche form documents indexed in RIE. There seems to be a strong case, then, for including ERIC in the data bases used in the Project.

The problem of costs (and cost-benefit) cannot, however, be ignored. It seems likely that on the one hand, many members of the Project's main sample (and many educationalists generally) have information needs which can adequately be met through searches of the data bases currently available - whether because their interests do not extend to the American literature, because the American literature is largely irrelevant to their work, or because they would not have enough time to assimilate the additional material retrieved. On the other hand, some educationalists are specifically interested in educational developments in the U.S.A., while others consider that the American literature contains research findings which have important implications for their work. To these considerations must be added the question of microfiche acceptability: reactions to microfiches by the users in the study were mixed. Although this may reflect the widespread and well-known antipathy - or at least, lukewarm response - to material disseminated in this format rather than any particular characteristics of the ERIC microfiches themselves, there would be little value in providing access to microfiche for users who found it unacceptable.

It therefore seems desirable that, while ERIC should be available to the Project, searching should be carried out only for a sub-sample of users with a declared interest in American material and/or a readiness to process the additional items retrieved as a consequence. Users for whom searching of the existing data bases retrieved relatively little information might also be included. Furthermore, the ERIC facility might properly be considered as comprising two data bases, RIE and CIJE, with only RIE being searched for some users and only CIJE being searched for

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* It could justifiably be argued that results would have been even better had there been no upper limit on the numbers of references retrieved and an opportunity to conduct further searches using profiles refined in the light of the results of a first search. To set against this is the argument that the results of retrospective searching may not be applicable to the establishment of SDI services without a qualification of some kind.

others (particularly those antipathetic to microfiches). And finally, since approximately one-third of the journals covered by the British Education Index are also covered by CIJE, the latter could in some cases be viewed as an alternative, rather than as a complement, to the former.

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APPENDIX I

University of Lancaster

BRITISH LIBRARY PROJECT ON
EXPERIMENTAL INFORMATION
SERVICES IN EDUCATION

ERIC Searches

No. 1 (A RESEARCH PROJECT ON NON-ATTENDANCE AT SCHOOL)

Search Specification:
They have found that the search headings which have been most useful are TRUANCY, ATTENDANCE, SCHOOL PHOBIA, NON-ATTENDANCE, and SEPARATION ANXIETY.

Profile: ATTENDANCE (NOT COLLEGE ATTENDANCE OR TEACHER ATTENDANCE) AND TRUANCY OR ANXIETY OR SCHOOL PHOBIA

Number of references retrieved: 58

No. 2 (A RESEARCH PROJECT ON OPEN PLAN SCHOOLS)

Search Specification:
Anything on open plan primary schools

Profile: OPEN PLAN SCHOOLS AND PRIMARY EDUCATION OR PRIMARY GRADES OR EARLY CHILDHOOD EDUCATION OR ELEMENTARY EDUCATION OR ELEMENTARY SCHOOLS OR ELEMENTARY GRADES

Number of references retrieved: 138

No. 3 (DEPUTY PRINCIPAL OF A COLLEGE OF EDUCATION)

Search Specification:
Methods of curriculum evaluation suitable for assessing teacher training curricula.

Profile: TEACHER EDUCATION CURRICULUM AND CURRICULUM EVALUATION AND EVALUATION METHODS OR TEACHER EDUCATION CURRICULUM AND EVALUATION METHODS

Number of references retrieved: 22

No. 4 (A SENIOR COLLEGE OF EDUCATION LECTURER AND CO-ORDINATOR OF AN IN-SERVICE COURSE)

Search Specification:
Education of children with special needs in ordinary schools. "Ordinary schools" means schools not intended to cater specifically for children with special needs.

Profile: SPECIAL CLASSES AND (LEARNING DIFFICULTIES OR REMEDIAL INSTRUCTION OR REMEDIAL PROGRAMS) AND (PHYSICALLY HANDICAPPED OR EDUCABLE MENTALLY HANDICAPPED OR HANDICAPPED OR HANDICAPPED CHILDREN OR ACADEMICALLY HANDICAPPED OR LOW ABILITY STUDENTS) NOT (SPECIAL SCHOOLS OR HOSPITALIZED CHILDREN OR HOMEBOUND CHILDREN OR HOSPITAL SCHOOLS)

Number of references retrieved: 13

No. 5 (A PRIMARY TEACHER STUDYING PART-TIME FOR A PH.D.)

Search Specification:
The social class bias and sexist content of reading schemes and the preferences shown by children for different schemes. Chiefly interested in children at the primary level. "Reading schemes" implies a fairly systematic programme of materials.

Profile: ELEMENTARY EDUCATION AND ((READING PROGRAMS OR SEQUENTIAL READING PROGRAMS) AND (READING HABITS OR READING INTERESTS)) + BIAS AND BOOKS AND CHILDREN

Number of references retrieved: 7 + 15

No. 6 (PROJECT ON THE READING ABILITY OF SCHOOL LEAVERS)

Search Specification:
The project is particularly interested in those with a low level of reading ability and the links with adult illiteracy.

Profile: (YOUNG ADULTS OR OUT OF SCHOOL YOUTH) AND (READING LEVEL OR READING ABILITY OR FUNCTIONAL ILLITERACY OR LITERACY)

Number of references retrieved: 10

No. 7 (Professor N. J. Entwistle and associates)

Search Specification:
Student's learning styles, strategies and intellectual development in higher education.

Profile: COLLEGE STUDENTS AND (COGNITIVE DEVELOPMENT OR COGNITIVE PROCESSES OR LEARNING ACTIVITIES OR LEARNING PROCESSES OR LEARNING THEORIES) AND STUDY HABITS
+ COLLEGE STUDENTS AND (COGNITIVE DEVELOPMENT OR COGNITIVE PROCESSES) OR (LEARNING PROCESSES OR LEARNING THEORIES)

Number of references retrieved: 6 + 21

No. 8 (D. J. Hounsell)

Search Specification:
Information seeking and use of all kinds by educationalists

Profile: [USE STUDIES AND (INFORMATION DISSEMINATION OR INFORMATION SEEKING OR INFORMATION UTILIZATION OR RESEARCH UTILIZATION)] AND {((ADMINISTRATIVE PERSONNEL AND (SCHOOL ADMINISTRATION OR COLLEGE ADMINISTRATION)) OR EDUCATIONAL RESEARCHERS OR INSTRUCTIONAL STAFF} + (INFORMATION DISSEMINATION OR INFORMATION SEEKING OR INFORMATION UTILIZATION OR RESEARCH UTILIZATION) AND INFORMATION NEEDS AND (EDUCATIONAL RESOURCES INFORMATION CENTER OR EDUCATIONAL INFORMATION CENTERS OR EUDISED)

Number of references retrieved: 4 + 3

No. 9 (A MANAGEMENT TEACHER DEVELOPMENT UNIT)

Search Specification:
Interested in the general area of teaching and learning in relation to management education and management development. Within this broad area, they're interested in
(1) Learning theories and models relevant to management, adult, professional and vocational education
(2) Design of management courses, programmes and workshops
(3) Teaching skills, teacher-student interaction and behaviour
(4) "Teaching/learning methods e.g. use of case studies, discovery learning, methods for skill development"
(5) Strategies for management education and development

Profile: LEARNING THEORIES AND (MANAGEMENT EDUCATION OR MANAGEMENT DEVELOPMENT) + TRAINING TECHNIQUES AND (MANAGEMENT EDUCATION OR MANAGEMENT DEVELOPMENT)

Number of references retrieved: 3 + 9

No. 10 (AN EDUCATIONAL PSYCHOLOGIST)

Search Specification:
Specific learning difficulties of speech, language and literacy - especially auditory discrimination, auditory sequential memory, visual discrimination of alphabetic forms and visual sequential memory. Expressed in another way, the interest is in perceptual (learning) difficulties in reading and spelling.

Profile: (READING OR SPELLING OR LANGUAGE OR SPEECH OR LITERACY) AND LEARNING DIFFICULTIES AND (VISUAL PERCEPTION OR AUDITORY PERCEPTION OR AUDITORY DISCRIMINATION OR VISUAL DISCRIMINATION)

Number of references retrieved: 17

No. 11 (A PRIMARY SCHOOL HEADMISTRESS)

Search Specification:
Religious education at the primary level

Profile: RELIGIOUS EDUCATION AND (PRIMARY EDUCATION OR PRIMARY GRADES OR EARLY CHILDHOOD EDUCATION OR ELEMENTARY EDUCATION OR ELEMENTARY GRADES OR ELEMENTARY SCHOOLS)

Number of references retrieved: 22

No. 12 (A TEACHER IN A SMALL RURAL PRIMARY SCHOOL)

Search Specification:
Problems of small, rural community schools.

Profile: RURAL SCHOOLS AND (COMMUNITY DEVELOPMENT OR COMMUNITY SUPPORT OR COMMUNITY INVOLVEMENT OR COMMUNITY SERVICES)

Number of references retrieved: 8

No. 13 (A SPECIALIST IN THE APPLICATION OF A/V MEDIA TO INSTRUCTION)

Search Specification:

Design and evaluation of individualised, resource-based learning with particular reference to the use of concepts of educational technology and the application of audio-visual aids and the media to problems of the design and evaluation of individualised, resource-based learning.

Profile: INDIVIDUALIZED INSTRUCTION AND (RESOURCE MATERIALS OR EDUCATIONAL RESOURCES) AND (AUDIOVISUAL? OR MULTI MEDIA INSTRUCTION OR INSTRUCTIONAL MEDIA OR EDUCATIONAL TECHNOLOGY)

Number of references retrieved: 16

No. 14 (A POLYTECHNIC LECTURER CARRYING OUT PERSONAL RESEARCH)

Search Specification:

Strong interest in small group teaching in higher education, and particularly in an appropriate research methodology for its investigation.

Profile: HIGHER EDUCATION AND (SMALL GROUP INSTRUCTION OR TUTORIAL PROGRAMS)

Number of references retrieved: 51